133 gone eight miles he crossed Gopher Creek, which probably dried during the summer, and after having gone a total of thirty-four miles he camped on Cottonwood Creek which he said was a constant stream. This took him through a no-man's-land unclaimed, so far as we know, by any Yokuts tribe.

[134] [136] The soil was not only of the most wretched description, dry, powdery and decomposed, but was everywhere burrowed by gophers, and a small animal resembling a common house rat... of a whitish grey color, short round body, and a very strong bony head. These animals are innumerable, though what they subsist upon I cannot conceive, for there is little or no vegetation. Their holes and burrows, into which a horse sinks to his knees at almost every step, render the travelling difficult and dangerous. The low hills south of Gopher Creek extend about eight miles into the plain, their summit being about on the same level as the plain between that stream and Moore's [Deer] Creek, and are singularly intersected by valleys running nearly south and north, which are crossed by other numerous small valleys running nearly east and west, thus dividing the whole of this portion of the valley into blocks of hills about a quarter of a mile square, and from one hundred to three hundred feet in height.[12]

Continuing southward on the 9th, Derby passed through country we believe belonged to the Tuhohi. He went thirteen miles along the north branch of the Kern River.

...a very broad deep stream with a current of six miles an hour, which, rising high up in the Sierra Nevada, discharges itself by two mouths into Buena Vista lake near its northern extremity. Three large sloughs also make out from the river near its mouth and from an extensive swamp in the plain upon the north bank of the lake. We found the river impassable with animals.

On the 10th, having got across Kern River, he reached Buena Vista Lake in Hometwali territory.

Buena Vista lake is a sheet of water about ten miles in length and from four to six miles in width; it lies about eight miles from the head of the valley formed by the junction of the ridges of the Coast Range and Sierra Nevada. Like other bodies of water in the valley it is nearly surrounded with tulé, and upon its north and east banks there is found a heavy growth of willows. A slough, some sixty miles in length, connects it with the swamp and bodies of standing water in the bed of Ton Taché, and through them with the great northern lake. The surrounding land is sterile and unproductive when not an absolute swamp, with the exception of

[12] Ibid., 265.

133 At this time each of the creeks was at its height; they are deep and rapid, and four of them much wider than Tulé river.[35]

The condition of the country between the territory of the Wukchumni and Gawia on the Kaweah River and that of the tribes on Kings [312 River was much as it is now (save for oases of 311] agriculture made possible by modern irrigation), and the region seems to have been without native villages, the area probably being used only for hunting and seed-gathering.

On the 15th and 16th of May, Derby's party completed the crossing of the Kaweah sloughs (the "four creeks"), left the Cowees (Gawia) on the 17th and headed for Kings River.

[134 .. our course lay over a barren sandy plain, interspersed here and there with spots of vegetation, but in general a perfect contrast to the rich soil upon the river Francis [the Kaweah]. About 6 miles from the fifth creek we observed four isolated hills or buttes about six hundred feet high, two of them ranging nearly north and south, and about two miles apart. At the first of these is a constant spring of water....We arrived upon the banks of the Kings River at about 5 P.M., having travelled 23.66 miles in a direct line across the plains.[36]

After a day spent on Kings River, probably at about the present site of Centerville, having ridden up the north bank about fifteen miles and having talked with one or two white men established at the ferry, Derby wrote as follows.

The Kings River is the largest stream in the valley, at this time of spring floods about three hundred yards wide, with a rapid current and water cold as ice. It is about sixty miles in length, rising in two branches high up in the Sierra, which uniting about forty miles from its mouth flow in a southwest direction through the hills and valley, and empty into the Taché [Tulare] lake at its northeast extremity. Its banks are high and well timbered, and the country in its immediate vicinity is apparently fertile. It forms five sloughs like the Francis, but they are much wider and the country between them is swampy and difficult of [16] access. There are no less than seventeen 36] rancherías of Indians upon this river, numbering in all probably about three thousand, in- [648 cluding those situated among the hills of the 181] vicinity. Of these those living upon the lower part of the river are friendly and well disposed toward the whites; those high up among the hills are entirely ignorant, treacherous and mischievous I was informed by Colonel Hampton, at the upper ferry, that the Cho-e-minee [Choinimni] rancheria, situated in his

[35] Ibid., 257.

[36] Ibid., 258-260.

412 The Telamni wooden mortar was described by
322 B.O., a Waksachi informant, during his discussion of trade (see Pt. II). The mortar was made from the crotch of an oak tree which, being of mixed grains at this point, was very hard. It was burned down to a rough size, then burned at the heart and the charcoal scraped and chopped out. This treatment was given inside and out until the desired size was reached. A slender pestle of stone was used with it.
[438] These mortars the Telamni sold to the lake-dwellers, Chunut, Tachi, and Wowol, preferring for themselves stone mortars of both large and small sizes which they also bought from the Waksachi or intervening Wukchumni.

## Pottery

323 Pottery was not made by the lake tribes.[46] Even a knowledge of it in old times was denied by M.G., while J.A. said she had seen it made by Wukchumni women (M.P. and daughters) but did not remember how. My demonstration of the motor actions of making a "rope" of clay merely elicited a description of firemaking. Red clay
● [134 was sometimes shaped with the fingers into
757] little dishes (ṭipe´kɨl ki´wɨs). It was chiefly valued as a medicament smeared on the chest.
[438] A reliable Wukchumni informant (M.L.) said that pottery was traded to the lake people.

## Basketry

285 No detailed description of basketmaking
438 techniques was obtained from the Chunut and Tachi informants, but both had important statements concerning forms and materials. This aged Tachi informant (M.G.) repeatedly affirmed that the lake people did not make coiled baskets in old times, that the coiled pieces were obtained by trade. The Wechihit and Choinok had coiled wares, she believed, but the foothill people, Wukchumni, Gawia, and Yaudanchi were the ultimate source for lake trade. In exchange, the handsome tule mats from the lake were prized in the foothills. The Tachi, Wowol, and others dwelling in the tular used a twined technique exclusively on tule and willow materials. There is little remaining evidence of the tule wares, as they are perishable in texture and not attractive as museum pieces.

285 In the collections of the University of California are a few pieces from "Santa Rosa Rancheria, Lemoore" which might have been made by a member of any lake tribe, and a few tule baskets of miscellaneous provenience.

The following basket types were described by M.G. (see figs. 2, 3). An open conical basket (čoto´t), which might be large or small, was made of triangular tules (pumu´k). A seed

[46] Vide Gayton, Yokuts and Western Mono Pottery-Making.

10: Beals & Hester E-4, 5 (no date) 1958
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climate (BSh), distributed mainly along the western margin and sporadically elsewhere.

Soils throughout most of this region are of alluvial valley or valley terrace type. Extensive areas of these are either poorly drained acid soils or are heavily saline, supporting little or no useful vegetation. In the hills to the west and south, are some areas of neutral upland soils, normally favorable to the growth of hardwood trees, especially oaks. In this instance, however, these soils usually are barren because of aridity. In the habitat of the Buena Vista Yokuts, there are only 96 square miles covered predominantly with hardwood trees, but this includes no oaks or other trees economically useful from the standpoint of Indian technology. In the coast ranges to the west of the southern valley Yokuts are 163 square miles occupied by woodland-grass associations (a park landscape of mixed grass and hardwoods) but the trees here are sparse with relatively few oaks. Although included in the area usually attributed to the southern valley Yokuts, there is no evidence that this upland region was exploited. Over most of the entire habitat attributed to the southern valley Yokuts a sparse desert type vegetation prevailed.[3]

The rather grim desert environment was mitigated by streams flowing from the mountains. Many of these, especially those draining from the high Sierra Nevada to the east were perennial. Virtually all the drainage went into three shallow basins of Tulare, Kern, and Buena Vista lakes. Only in years of unusually high precipitation in the mountains did overflow water from the lakes drain into the San Joaquin River system and hence reach the ocean. Along streams and stagnant sloughs occurred some shrubs and trees and river bottoms might support lush grasses. The vegetation of primary economic importance was the tule which grew along streams and sloughs and especially in the extensive *tulares* around the marshy margins of the lakes. Tule, hispanicized from the Nahuatl *Tollin,* here is the bullrush, chiefly *Scirpus acutis.*

Fish, shellfish and waterfowl were the most abundant animal forms. Few deer existed in the area. The California deer is a browsing

[3] See Weislander and Jensen for vegetation data and Storie and Weir for soils data. Other environmental data are summarized from compilations made by the project on a state-wide basis, utilizing a wide variety of government documents, geographical and ethnographic reports, too numerous to list in this short paper, supplemented by spot field observations.